nitric oxide and derivatives containing the NO group;

cupric ions and complexes containing Cu^{+2}; and

ferric ions and complexes containing Fe^{+3};

wherein the compound is not a C-nitroso compound of the formula R-C-NO, and wherein R is any atom or molecule, and X is selected from the group consisting of F, I, Br and Cl, and wherein contacting said retrovirus with said compound inactivates said retrovirus.

REMARKS

As an initial matter, Applicants wish to thank the Examiner for correcting a minor oversight by the Applicants in misnumbering the newly added claims in the Preliminary Amendment. Applicants also hereby acknowledge renumbering of Claims 22-27, which were added in the Preliminary Amendment, to Claims 24-29 by the Examiner.

This is an Amendment and Response in connection with a Request for Continued Examination of the above-identified patent application. A petition for three-month extension of time is also enclosed herewith, thereby preserving the pendency of the above-identified application.

Claims 22-29 are pending in this application. Claims 22 and 23 have been cancelled. Claim 24 has been amended. Upon entry of this Amendment and Response Claims 24-29 will be pending in this application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made." In addition, for the convenience of the Examiner, all claims now pending following entry of the present Amendment and Response are reproduced in the attached page captioned "Pending Claims."

Priority

The specification has been amended to include a reference to the prior applications.

Rejection Under 35 U.S.C. §112, second paragraph

Claims 24-29 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. In particular, the Office Action states that metes and bounds for determining NO derivate is unclear "because of the exclusionary language n the claim drawn to molecules containing an 'NO' group, i.e., R–C–NO." See page 3 of the Final Office Action. Furthermore, the Office Action alleges the claims are indefinite "because the NO derivative, R–C–NO...is expressly excluded from the claims, [one] cannot [determine]...what an 'NO derivative' is, structurally or functionally." *Id.*

It is noted that all that the patent laws require is that the claims be sufficiently clear that those skilled in the art are able to determine whether a compound of interest is (or is not) within the scope of the claims. *In re Mercier*, 185 U.S.P.Q. 774 (C.C.P.A. 1975) (claims sufficiently define an invention so long as one of ordinary skill can determine what subject matter is or is not within the scope of the claims). The present claims comply with this standard.

One skilled in the art will readily recognize that "derivatives containing the NO group" refers to any compound which has NO group as a substituent. As the chemical definition in the Webster's Dictionary indicates, the term "derivative" refers to "A compound derived or obtained from known or hypothetical substances and **containing essential elements of the parent substance**." (Emphasis added). See Exhibit A, Webster's II, New College Dictionary, 2001, page 305. One skilled in the art will readily recognize that the essential element of a "NO derivative" is the presence of a nitric oxide (NO) substituent. Thus, one of skill in the art would readily recognize that the term "NO derivatives" refers to compounds that contain a nitric oxide (i.e., NO) functional group.

As for the claim limitation excluding C-nitroso compound of the formula R-C-NO, one skilled in the art would readily recognize that this exclusion applies to only those compounds where the NO group is attached directly to a carbon atom. Use of a negative limitation in a claim is not new or prohibited in the U.S. Patent practice. See

MPEP §2173.05(i) ("So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 U.S.C 112, second paragraph.").

Since one skilled in the art would not have any difficulty in determining whether a particular NO derivative is within the scope of the present invention, it is submitted that the rejection under 35 U.S.C. §112, second paragraph, is improper. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

The Office Action also alleges the term "complex" in referring to cupric or ferric ion complexes is indefinite because "there is ambiguity for what a 'complex' of either ion would be...." See page 4 of the Final Office Action.

Complexes containing Cu^{+2} or Fe^{+3} are readily recognized by one of skill in the art as a molecules, or a group of molecules, that contain cupric or ferric ions, respectively. Since Cu^{+2} and Fe^{+3} are charged species, they do not exist in a free form as Cu^{+2} and Fe^{+3} ions but are coordinated with other anionic moieties (in some cases additional cation(s) and/or neutral ligand(s) as well) to maintain net electroneutrality. Thus, the term "cupric complex" or "ferric complex" refers to any compound that contains copper in oxidation state of +2 or iron in oxidation state of +3, respectively.

Since one skilled in the art can readily determine the oxidation state of copper or iron in a given molecule, it is submitted that the term "complex" is not ambiguous. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Rejection Under 35 U.S.C. §112, first paragraph

New Matter Rejection

Claims 24-29 are rejected under 35 U.S.C. §112, first paragraph, as allegedly containing new matter. In particular, the Office Action alleges that the specification does not contain support for the negative limitation of Claim 22, which

states that the compound that inactivates the retrovirus is not a C-nitroso compound having the formula R–C–NO.

Compounds that accept electrons from CCHC fingers are disclosed on *inter alia* page 19, lines 5-15, which include "nitroso compounds having the formula R–NO." The nitroso compounds are distinguished from the nitric oxide derivatives by specifically listing nitroso compounds in the specification. Furthermore, C-nitroso compounds are also distinguished from the nitric oxide derivatives because they are specifically discussed in the specification, for example, on page 26 line 2. However, nitroso C-nitroso compounds are excluded in various methods for inactivating a retrovirus. See, for example, page 4, lines 3-14, and page 4, line 24, to page 5, line 7. By disclosing C-nitroso compounds in the specification but excluding them in the claims, one skilled in the art would recognize that the claims do not include C-nitroso compounds. Thus, the negative limitation excluding the C-nitroso compounds is implicitly supported in the specification. And adding this negative limitation is explicitly stating what is already implicitly stated in the specification. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112, first paragraph.

Lack of Written Description Rejection

Claims 24-29 are rejected under 35 U.S.C. §112, first paragraph, for alleged lack of written description. In particular, the Office Action states that "Applicant does not convey possession of every ferric or cupric ion complex or NO derivative that may exist and has not demonstrated written description that identifies a range of structures containing cupric ions or ferric ions or NO derivatives that would immediately identify itself to one of skill in the art to practice the invention." See page 7 of the Final Office Action.

The first paragraph of § 112 requires that the disclosure of a patent application be such that persons skilled in the art, having read the patent application, would be able to practice the inventions described by the claims. There is no legal

requirement that this be done in any particular manner; an enabling disclosure can be provided by the use of illustrative examples or simply by broad terminology. *In re Marzocchi*, 169 USPQ 367 (C.C.P.A. 1971). Moreover, a patent application must be deemed to be enabling unless there is reason to doubt the truth of statements contained in the patent application relating to making and using the invention. *Id* at 369-370.

The present invention is directed to a composition comprising an inactivated retrovirus. The retrovirus is inactivated using one of several classes of compounds. The specification identifies compounds with a particular functional group or metal ions complexes that are useful in inactivating retroviruses. The specification also specifically discloses many compounds with the ability to inactivate retroviruses in the described manner, including, for example, tetraethylthiuram disulfide (*see*, page 22, lines 25-26), and cupric chloride (*see*, page 24, lines 6-12 of the specification). A number of compounds suitable for testing for their ability to inactivate retrovirus using the methods disclosed in the specification are found in Table 2, on pages 31-33 of the specification. The specification also describes a set of specific tests and reagents that can be used to screen and identify compounds based on their ability to react with and disrupt retroviral zinc fingers in the viral NC proteins (*see*, page 3, lines 21-24 of the specification).

The presence of a particular functional group or a particular metal ion complex allows a compound to be capable of inactivating a retrovirus. It is this aspect of the compound that is claimed in the present invention. As stated in the specification, many of these compounds are commercially available or can be readily synthesized by one skilled in the art. See, for example, page 19, lines 17-18. Thus, the rejection of claims under 35 U.S.C. §112, first paragraph, is without improper. Accordingly, Applicants request withdrawal of the rejections under 35 U.S.C. §112, first paragraph.

Rejection Under 35 U.S.C. §102

As an initial matter, it is noted that claims are anticipated if, and only if, **each and every element** as set forth in the claim is found in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051 (Fed. Cir. 1989). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913 (Fed. Cir. 1989). See also, *PPG Industries Inc. v. Guardian Industries Corp.*, 7 USPQ2d 1618, 1624 (Fed. Cir. 1996) ("To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.")

Rejection based on the Ryser et al. reference

Claims 24-26, 28, and 29 are rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by the Ryser *et al.* reference for reasons of record. In particular, the Office Action alleges that the Ryser *et al.* reference discusses reducing disulfides in the HIV envelope glycoprotein to inhibit viral entry. The Office Action then states that this viral entry inhibition is a form of virus inactivation, and therefore anticipates the present invention.

The present invention is directed to a composition comprising an inactivated retrovirus, wherein the retrovirus is inactivated by contact with a compound selected from a group of specified compounds defined in the specification and the claim. Moreover, inactivation of the retrovirus is due to disruption of one or more CCHC zinc fingers.

In contrast, the Ryser *et al.* reference discusses inhibiting HIV infection by inhibiting a thiol-disulfide interchange mediated by PDI. See, for example, the Results section bridging two columns on page 4560. Thus, the Ryser *et al.* reference does not disclose that inhibition of HIV infection is not due to disruption of one or more CCHC zinc fingers.

Since disruption of the CCHC zinc fingers results in *inter alia* removal of Zn ion from the CCHC zinc fingers, the resulting retrovirus is different in composition than retroviruses that are inactivated differently. Therefore, every element as set forth in

the claims of the present application is not found in the Ryser et al. reference. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 102(a) based on the Ryser et al. reference be withdrawn.

Rejection based on the Williams et al. reference

Claims 24-29 are rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Williams et al. reference (PCT Publication No. WO 94/19321). The Office Action alleges that the Williams et al. reference discusses HIV that has been inactivated by bis (4-chlorophenyl) disulfide.

As discussed above, the present invention is drawn to a composition comprising an inactivated retrovirus, where its inactivation is due to disruption of one or more CCHC zinc fingers by contacting the retrovirus with a compound selected from a group of specified compounds.

In contrast, the Williams et al. reference discusses indole compounds that inhibit the enzyme HIV reverse transcriptase. None of the compounds of the present invention is disclosed in the Williams et al. reference. Moreover, the Williams et al. reference does not disclose a composition comprising an inactivated retrovirus. Furthermore, the Williams et al. reference does not disclose inactivation of HIV by disrupting its CCHC zinc fingers.

Moreover, disruption of the CCHC zinc fingers results in *inter alia* removal of Zn ion from the CCHC zinc fingers, the resulting retrovirus is different in composition than retroviruses that are inactivated differently. Therefore, every element as set forth in the claims of the present invention is not found in the Williams et al. reference, 35 U.S.C. §102(a). Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 102(a) based on the Williams et al. reference be withdrawn.

Rejection based on the Levine, et al. reference

Claims 24-26, 28, and 29 are rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by the Levine et al. reference (PCT Publication No. WO 93/15730).

The Levine et al. reference discusses inhibiting HIV protease by contacting the virus with a sulfhydryl-reactive compound, such as 5,5'-dithio-bis (2-nitrobenzoic acid). Thus, the virus is inactivated by inhibiting its protease enzyme.

In contrast, compositions of the present invention comprise inactivated retrovirus where its inactivation is due to disruption of one or more CCHC zinc fingers by contacting the retrovirus with a compound selected from a group of specified compounds. Since disruption of the CCHC zinc fingers results in *inter alia* removal of Zn ion from the CCHC zinc fingers, the resulting retrovirus is different in composition than retroviruses that are inactivated differently.

Therefore, every element in the claims of the present invention is not found in the Levine et al. reference, 35 U.S.C. §102(a). Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 102(a) based on the Levine et al. reference be withdrawn.

Rejection based on the Rice et al. reference

Claims 24, 28, and 29 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by the Rice et al. reference. In particular, the Office Action asserts that the Rice et al. reference anticipates the present invention "because the mechanism of viral inactivation is not recited in the instant claims." See page 9 of the Final Office Action.

Independent Claim 24 has been amended to include a limitation that the inactivation of the retrovirus is due to disruption of one or more CCHC zinc fingers thereby obviating this rejection.

In addition, Applicants request that the copy of Dr. Rice's Declaration submitted on April 2, 2002 be made of record in the instant application.

Rejection based on the Levine et al. reference

Claims 24, 28, and 29 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by the Levine et al. reference (WO 92/15329).

As acknowledged in the Office Action, the Levine et al. reference discusses inactivating protease enzyme of HIV.

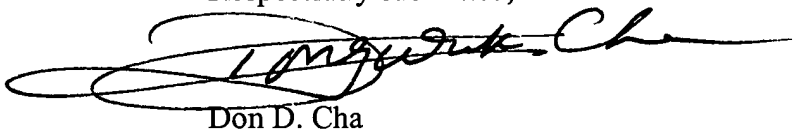
In contrast, compositions of the present invention comprise inactivated retrovirus where its inactivation is due to disruption of one or more CCHC zinc fingers by contacting the retrovirus with a compound selected from a group of specified compounds. Since disruption of the CCHC zinc fingers results in *inter alia* removal of Zn ion from the CCHC zinc fingers, the resulting retrovirus is different in composition than retroviruses that are inactivated differently.

Therefore, every element in the claims of the present invention is not found in the Levine et al. reference, 35 U.S.C. §102(b). Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 102(b) based on the Levine et al. reference be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged. If the Examiner believes a telephone conference would aid in the prosecution of this case in any way, please call the undersigned at 925-472-5000.

Respectfully submitted,



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EGW:lls
WC 9044273 v1

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

Paragraph beginning at line 10 of page 1 has been amended as follows:

This application is a **divisional application of U.S. Patent Application No. 08/379, 420, filed January 27, 1995, now U.S. Patent No. 6,001,555, issued on December 14, 1999, which is a** continuation-in-part application of USSN 09/312,331, filed September 23, 1994, which is incorporated herein by reference in its entirety for all purposes.--

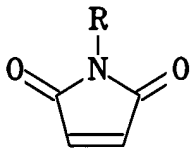
In the claims:

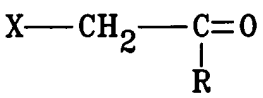
Original Claims 22 and 23 in the parent application have been cancelled.

Claim 24 have been amended as follows.

24. (Amended) A composition comprising an inactivated retrovirus, wherein the retrovirus is inactivated **due to disruption of one or more CCHC zinc fingers** by contact with a compound selected from the group consisting of:

disulfides having the formula R-S-S-R;

maleimides having the formula  ;

alpha-halogenated ketones having the formula  ;

hydrazides having the formula R-NH-NH-R;

nitric oxide and derivatives containing the NO group;

cupric ions and complexes containing Cu^{+2}; and

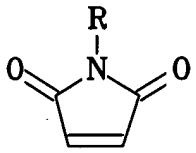
ferric ions and complexes containing Fe^{+3};

wherein the compound is not a C-nitroso compound of the formula R-C-NO, and wherein R is any atom or molecule, and X is selected from the group consisting of F, I, Br and Cl, and wherein contacting said retrovirus with said compound inactivates said retrovirus.

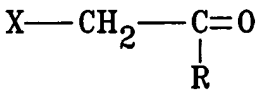
PENDING CLAIMS

24. A composition comprising an inactivated retrovirus, wherein the retrovirus is inactivated due to disruption of one or more CCHC zinc fingers by contact with a compound selected from the group consisting of:

disulfides having the formula R-S-S-R;



maleimides having the formula ;



alpha-halogenated ketones having the formula ;

hydrazides having the formula R-NH-NH-R;

nitric oxide and derivatives containing the NO group;

cupric ions and complexes containing Cu^{+2}; and

ferric ions and complexes containing Fe^{+3};

wherein the compound is not a C-nitroso compound of the formula R-C-NO, and wherein R is any atom or molecule, and X is selected from the group consisting of F, I, Br and Cl, and wherein contacting said retrovirus with said compound inactivates said retrovirus.

25. The composition of claim 24, wherein the compound is selected from the group consisting of: Tetramethylthiuram Disulfide, Tetraethylthiuram Disulfide, Tetraisopropylthiuram Disulfide, Tetrabutylthiuram Disulfide, Dicyclopentamethylenethiuram Disulfide, Isopropylxanthic Disulfide, O,O-Diethyl Dithiobis-(Thioformate), Benzoyl Disulfide, Benzoylmethyl Disulfide, Formamidine Disulfide 2HCl, 2-(Diethylamino)ethyl Disulfide, Aldrithiol-2, Aldrithiol-4, 2,2-Dithiobis(Pyridine N-Oxide), 6,6-Dithiodinicotinic Acid, 4-Methyl-2-Quinolyl Disulfide, 2-Quinolyl Disulfide, 2,2 Dithiobis(benzothiazole),

2,2-Dithiobis(4-Tert-Butyl-1-Isopropyl)-Imidazole, 4-(dimethylamino)phenyl disulfide, 2-Acetamidophenyl Disulfide, 2,3-Dimethoxyphenyl Disulfide, 4-Acetamidophenyl Disulfide, 2-(Ethoxycarboxamido)phenyl Disulfide, 3-Nitrophenyl Disulfide, 4-Nitrophenyl Disulfide, 2-Aminophenyl Disulfide, 2,2 Dithiobis(benzonitrile), p-Tolyl Disulfoxide, 2,4,5-Trichlorophenyl Disulfide, 4-Methylsulfonyl-2-Nitrophenyl Disulfide, 4-Methylsulfonyl-2-Nitrophenyl Disulfide, 3,3-Dithiodipropionic Acid, N,N-Diformyl-L-Cystine, Trans-1,2-Dithiane-4,5-Diol, 2-Chloro-5-Nitrophenyl Disulfide, 2-Amino-4-Chlorophenyl Disulfide, 5,5-Dithiobis(2-Nitrobenzoic Acid), 2,2-Dithiobis(1-Naphtylamine), 2,4-Dinitrophenyl *p*-Tolyl Disulfide, 4-Nitrophenyl *p*-Tolyl Disulfide, and 4-Chloro-3-Nitrophenyl Disulfideformamidine disulfide dihydrochloride.

26. The composition of claim 24, wherein the compound selected from the group consisting of disulfides having the formula R-S-S-R.

27. The composition of claim 24, wherein the compound is Aldrithiol-2.

28. The composition of claim 24, wherein the retrovirus is selected from the group consisting of *Lentiviruses* and *Oncoviruses*.

29. The composition of claim 28, wherein said retrovirus is an HIV-1 retrovirus.

r temporary use. 5. A dep
natural process, as mineral
le·pos'i·tor n.
-ies. 1. A person entrus

ne act of deposing, as from
thing deposited : DEPOSIT
en statement by a witness
ep'o·si'tion·al adj.
ē) n., pl. -ries. 1. A pl
eping. 2. DEPOSITARY 1.
OFr. depost < Lat. deposit
deposit.] 1. A bus or rail
installation for military
ying, and assembling mili

rav·ing, -praves. [ME
t. depravare : de- (intensive
ORRUPT. —dep'ra·va'ti

ebased and corrupt : PERV
rāvd'lē) adv.
ies. 1. Moral corruption

ed, -cat·ing, -cates.
ayer : de-, against + precari
o belittle : depreciate. usag
ched upon the meaning of
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cion n. —dep're·ca'tor
tôr'ē) also dep·re·ca·t
DISAPPROVING. —dep're

Capable of being depreciated

t·ed, -at·ing, -ates.
of LLat. depretiare : Lat.
To lessen the value or price
mportant : DISPARAGE.
or n.
ALUATE, DEVALUE, DOWNGRA
r become less in price or
ated.> <used cars that st

n) n. 1. A decrease or loss in
llowance made for a loss in v
urchasing value of money.

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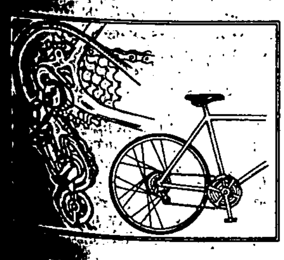
minishing in value. 2. Dis

ed, -dat·ing, -dates.
ensive) + Lat. praedari, to
on : PLUNDER —vi. To eng
—dep're·da'tor n.
'ē, dĕp'rĭ-də-) adj.
press·ing, -press·es. [ME
esser < Lat. depressus, p.part.
o press.] 1. To lower in sp
depress a pedal on a piano>
EN. 4. To lower prices in (
erving to lower the rate of

in spirits : DEJECTED. 2. Bot.
above. 3. Zool. Flattened alo
k below the surrounding re
d economic hardship.
, DEPRIVED, DISADVANTAGED
core meaning : economicall
pressed urban areas>
ausing esp. emotional depr
press'ing·ly adv.
The act of depressing or st
low its surroundings : HOLL
ic pressure. 4. The angular di
the point of observation. 5.
body below the horizon. 6.
lancholy : sadness. 8. Psych
rked by an inability to conce
and guilt. 9. A period of sev
loyment, decreasing busines

Great Depression, a period of

[economic] hardship during the 1930's.] Variously colored glassware produced in large quantities during the 1920's and 1930's.
de·pres·sive (dĭ-prĕs'ĭv) *adj.* 1. Causing depression. 2. Of or relating to psychological depression. **—de·pres'sive·ly** *adv.* **—de·pres'sive·ness** *n.*
de·pres·sor (dĭ-prĕs'ər) *n.* 1. Something that depresses or is used to depress. 2. A depressor nerve. 3. A muscle that causes depression or contraction of a part. 4. An instrument for depressing a part.
depressor nerve *n.* A nerve that lowers arterial blood pressure.
de·pres·sur·ize (dē-prĕsh'ə-rīz') *vt.* **-ized, -iz·ing, -iz·es.** To release from pressure. **—de·pres'sur·i·za'tion** *n.*
de·priv·al (dĭ-prī'vəl) *n.* Deprivation.
dep·ri·va·tion (dĕp'rə-vā'shən) *n.* 1. The act of depriving or state of being deprived. 2. A removal of rank or office.
de·prive (dĭ-prīv') *vt.* **-prived, -priv·ing, -prives.** [ME *depriven* < OFr. *depriver* < Med. Lat. *deprivare* : Lat. *de-*, completely + Lat. *privare*, to rob < *privus*, without.] 1. To take something away from. 2. To keep from having or enjoying : DENY <was *deprived* of the gold medal> 3. To remove from office. **—de·priv'a·ble** *adj.*
de·prived (dĭ-prīvd') *adj.* Marked by deprivation, esp. of economic or social necessities.
de·pro·gram (dē-prō'grăm', -grəm) *vt.* **-grammed, -gram·ming, -grams** *or* **-gramed, -gram·ing, -grams.** To try to counteract the effect of an indoctrination, esp. a religious indoctrination. **—de·pro'gram'mer** *n.*
depth (dĕpth) *n.* [ME *depthe* < *dep*, deep.] 1. The quality or condition of being deep. 2. **a.** The extent, measurement, or dimension downward, backward, or inward. **b.** The linear measurement or sense of distance from an observation point, as perspective in painting. 3. *often* **depths.** A deep part of or place <in the *depths* of the jungle> 4. The most profound or intense part or stage <the *depth* of misery> <the depth of meditation> 5. The severest or worst part, as of winter. 6. A bad or deteriorated condition. 7. Intellectual complexity or penetration : PROFUNDITY. 8. The range of one's understanding or competence <out of my *depth*> 9. The degree of richness or intensity, as of color. 10. Lowness in pitch. **—in depth.** With thoroughness <a report *in depth*>
depth charge *n.* A charge designed for explosion under water, used against submarines.
depth perception *n.* Perception of spatial relationships, esp. of distances between objects, in three dimensions.
depth psychology *n.* 1. Psychology of the unconscious. 2. Psychoanalysis.
dep·u·rate (dĕp'yə-rāt') *vt.* & *vi.* **-rat·ed, -rat·ing, -rates.** [Med. Lat. *depurare, depurat-* : Lat. *de-*, away + *purus*, pure.] To cleanse or purify or become cleansed or purified. **—dep'u·ra'tion** *n.* **—dep'u·ra'tor** *n.*
dep·u·ta·tion (dĕp'yə-tā'shən) *n.* 1. The act of deputing or state of being deputed. 2. DELEGATION 2.
de·pute (dĭ-pyōōt') *vt.* **-put·ed, -put·ing, -putes.** [ME *deputen* < OFr. *deputer* < LLat. *deputare*, to allot < Lat., to consider : *de-*, away + *putare*, to trim, arrange.] 1. To authorize or appoint as agent or representative. 2. To assign (e.g., authority) to another.
dep·u·tize (dĕp'yə-tīz') *vt.* & *vi.* **-tized, -tiz·ing, -tiz·es.** To appoint as or serve as a deputy. **—dep'u·ti·za'tion** *n.*
dep·u·ty (dĕp'yə-tē) *n., pl.* **-ties.** [ME *depute* < OFr. < p.part. of *deputer*, to depute.] 1. One designated or empowered to act for another. 2. An assistant exercising full authority in the absence of his or her superior and equal authority in emergencies. 3. A representative in a legislative body in certain countries.
de·rac·i·nate (də-răs'ə-nāt') *vt.* **-nat·ed, -nat·ing, -nates.** [< Fr. *déraciner* < OFr. *desraciner* : *des-*, apart (< Lat. *dis-*) + *racine*, root < LLat. *radicina* < Lat. *radix*.] To pull out by or as if by the roots : UPROOT. **—de·rac'i·na'tion** *n.*
de·rail (dē-rāl') *vi.* & *vt.* **-railed, -rail·ing, -rails.** [Fr. *dérailler* : *dé-*, off (< Lat. *de-*) + *rail*, rail < E.] 1. To run or cause to run off the rails. 2. To be thrown or throw off course. **—de·rail'ment** *n.*
de·rail·leur (dĭ-rā'lər) *n.* [Fr. *dérailler*, to become derailed : *dé-*, off (< Lat. *de-*) + *rail*, rail < E.] A gear mechanism on a bicycle that changes the gear ratio by moving the chain from one sprocket to another.



derailleur

de·range (dĭ-rānj') *vt.* **-ranged, -rang·ing, -rang·es.** [Fr. *déranger* < OFr. *desrengier* : *des-*, apart (< Lat. *dis-*) + *reng*, line, of Germanic orig.] 1. To disturb the order of. 2. To disturb the normal functioning or condition of. 3. To cause to become insane. **—de·range'ment** *n.*
der·by (dûr'bē; *Brit.* där'bē) *n., pl.* **-bies.** [After Edward Smith Stanley (1752–1834), 12th Earl of *Derby*, founder of the English Derby.] 1. Any of various annual horse races, esp. for three-year-olds. 2. A formal race either open to all or to a given category of contestants. 3. A stiff felt hat with a round crown and a narrow, curved brim.
de·reg·u·late (dē-rĕg'yə-lāt') *vt.* **-lat·ed, -lat·ing, -lates.** To decontrol. **—de·reg'u·la'tion** *n.*
der·e·lict (dĕr'ə-lĭkt') *adj.* [Lat. *derelictus*, p.part. of *derelinquere*, to abandon : *de-*, completely + *relinquere*, to leave behind (*re-*, behind + *linquere*, to leave).] 1. Neglectful of duty or obligation : REMISS. 2. Deserted by an owner or guardian : ABANDONED. —*n.* 1. Abandoned property, esp. a ship abandoned at sea. 2. A homeless person lacking means of support : VAGRANT. 3. *Law.* Land left dry by a permanent recession of the water line.
der·e·lic·tion (dĕr'ə-lĭk'shən) *n.* 1. Willful neglect, as of duty. 2. Abandonment. 3. *Law.* **a.** Accession of land by the permanent recession of the water line. **b.** The land so gained.
de·ride (dĭ-rīd') *vt.* **-rid·ed, -rid·ing, -rides.** [Lat. *deridēre* : *de-* (pejorative) + *ridēre*, to laugh at.] To laugh at or ridicule contemptuously. **—de·rid'er** *n.* **—de·rid'ing·ly** *adv.*
de ri·gueur (də rē-gœr') *adj.* [Fr.] Required by the current custom or fashion.
de·ri·sion (dĭ-rĭzh'ən) *n.* [ME *derisioun* < OFr. *derision* < LLat. *derisio* < Lat. *derisus*, p.part. of *deridēre*, to deride.] 1. The act of deriding or state of being derided. 2. An object of ridicule : LAUGHINGSTOCK.
de·ri·sive (dĭ-rī'sĭv, -zĭv, -rĭs'ĭv, -rĭz'-) *adj.* Expressing or provoking derision. **—de·ri'sive·ly** *adv.* **—de·ri'sive·ness** *n.*
de·ri·so·ry (dĭ-rī'sə-rē, -zə-) *adj.* Derisive.
der·i·vate (dĕr'ə-vāt') *adj.* Derivative.
der·i·va·tion (dĕr'ə-vā'shən) *n.* 1. **a.** The act or process of deriving. **b.** The state of being derived. 2. Something derived. 3. The form or source from which something is derived : ORIGIN. 4. The historical origin and development of a word : ETYMOLOGY. 5. The process by which new words are formed from existing words, chiefly by the addition of affixes to roots, stems, or words. 6. *Math.* A logical or mathematical process indicating through a sequence of statements that a result such as a theorem or a formula necessarily follows from the initial assumptions. **—der'i·va'tion·al** *adj.*
de·riv·a·tive (dĭ-rĭv'ə-tĭv) *adj.* 1. Resulting from derivation. 2. Copied or adapted from others. —*n.* 1. Something derived. 2. A word formed from another by derivation. 3. *Math.* The limit, as the increment in the argument of a function approaches zero, of the ratio of the increment in its value to the corresponding increment in the argument : the instantaneous rate of change of a function with respect to a variable. 4. *Chem.* A compound derived or obtained from known or hypothetical substances and containing essential elements of the parent substance. **—de·riv'a·tive·ly** *adv.* **—de·riv'a·tive·ness** *n.*
de·rive (dĭ-rīv') *v.* **-rived, -riv·ing, -rives.** [ME *deriven*, to be derived from < OFr. *deriver* < Lat. *derivare*, to derive : *de-*, away + *rivus*, stream.] —*vt.* 1. To receive or obtain from a source. 2. To arrive at by reasoning : deduce or infer. 3. To trace the origin or development of (e.g., a word). 4. *Chem.* To produce or obtain (a compound) from another substance by chemical reaction. —*vi.* To issue from a source : ORIGINATE. **—de·riv'a·ble** *adj.* **—de·riv'er** *n.*
derm (dûrm) *n.* var. of DERMA[1].
derm– *pref.* var. of DERMA-.
–derm *suff.* [< Gk. *derma*, skin.] Skin : covering <blasto*derm*>
der·ma[1] (dûr'mə) *also* **derm** (dûrm) *or* **der·mis** (dûr'mĭs) *n.* [NLat. < Gk., skin.] *Anat.* The corium.
der·ma[2] (dûr'mə) *n.* [Yiddish *derme*, pl. of *darm*, intestine < MHG < OHG.] Beef casing stuffed with a seasoned mixture of matzo meal or flour, onion, and suet, prepared by boiling, then roasting.
derma– *or* **derm–** *or* **dermo–** *pref.* [< Gk. *derma*, skin.] Skin <*dermal*>
–derma *suff.* [NLat. < Gk. *derma*, skin.] Skin : skin disease <sclero*derma*>
der·ma·bra·sion (dûr'mə-brā'zhən) *n.* A surgical procedure for removing skin imperfections, as wrinkles or scars, by abrasion of the frozen epidermis.
der·mal (dûr'məl) *also* **der·mic** (-mĭk) *adj.* Of or relating to the skin.
dermat– *pref.* var. of DERMATO-.
der·ma·ti·tis (dûr'mə-tī'tĭs) *n.* Inflammation of the skin.
dermato– *or* **dermat–** *pref.* [< Gk. *derma, dermat-*, skin.] Skin <*dermatome*>
der·mat·o·gen (dûr-măt'ə-jən) *n. Bot.* The outer layer of meristem, from which the epidermis is formed.
der·ma·toid (dûr'mə-toid') *n.* Resembling skin.
der·ma·tol·o·gy (dûr'mə-tŏl'ə-jē) *n.* Medical study of skin physiology and pathology. **—der'ma·to·log'i·cal** (-tə-lŏj'ĭ-kəl) *adj.* **—der'ma·tol'o·gist** *n.*
der·ma·tome (dûr'mə-tōm') *n.* The lateral wall of a somite, from which the corium is formed.

EXHIBIT
A